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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|--|-------------|----------------------|--------------------------------|------------------------|
| 10/695,832   | 10/30/2003  | Ryouichi Ootsu       | 501.43231X00                   | 7188                   |
| 20457 7590 05/16/2007<br>ANTONELLI, TERRY, STOUT & KRAUS, LLP<br>1300 NORTH SEVENTEENTH STREET<br>SUITE 1800<br>ARLINGTON, VA 22209-3873 |             |                      | EXAMINER<br>NGUYEN, JENNIFER T |                        |
|  |             |                      | ART UNIT<br>2629               | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>05/16/2007        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/695,832

Applicant(s)

OOTSU ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,4-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,4-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/23/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This Office action is responsive to Request for Continued Examination filed 4/23/07.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 4-8, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuwashiro (Patent No.: US 5,945,984).

Regarding claim 5, Kuwashiro teaches an image display device (fig. 1) is characterized in that a drive circuit (801, 701) which supplies signals to respective pixels in an image display part of a substrate through signal lines arranged in a plan (701) is formed outside the image display part (2) (col. 5, lines 18-36),

the drive circuit is constituted of a plurality of semiconductor devices (601-1 to 601-8, fig. 3), and the respective semiconductor devices are configured such that data are supplied between these respective semiconductor devices (601-1) and other semiconductor devices (601-2) which are arranged adjacent to these respective semiconductor devices through data transfer signal lines (783) arranged in the plane of the signal lines, and

a dummy line (731) arranged in the plane of the signal lines and the data transfer lines is formed between the signal lines (721) and the data transfer signal lines (783) (col. 6, line 36 to col. 7, line 10); wherein the dummy line (731) is formed so as to extend along the signal line (721).

Regarding claim 2, Kuwashiro teaches both ends of the dummy line (731) are not connected to other signal lines (721, fig. 3).

Regarding claim 4, Kuwashiro teaches the dummy line is constituted of a plurality of lines which are arranged in parallel (i.e., dummy pad).

Regarding claims 6 and 17, Kuwashiro teaches the signal lines are drain signal lines which supply video signals to respective pixels, and the drive circuit constitutes a video signal drive circuit (fig. 3).

Regarding claim 7, Kuwashiro teaches the signal lines are gate signal lines which supply scanning signals to respective pixels, and the drive circuit constitutes a scanning signal drive circuit (col. 2, lines 46-59).

Regarding claim 8, Kuwashiro teaches the signal lines which are arranged adjacent to each other are formed into groups (721), the signal lines which are formed into each group are directed in the converging direction outside the image display part and are connected to the respective semiconductor devices (fig. 1), and data transfer signal lines (783, fig. 3) which connect between one semiconductor device (601-1) and another semiconductor device (601-2) arranged adjacent to the one semiconductor device are formed such that the data transfer signal lines (783) loop around area at the image display part side between these respective semiconductor devices (fig. 3).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Ogawa (Patent No. US 6,680,759).

Regarding claim 11, Moon teaches an image display device is characterized in that a pair of electrodes are formed on each pixel within an image display part of a substrate, one of the pair of electrodes includes a counter electrode (122, fig. 6) to which a counter voltage supply signal which becomes a reference with respect to signals supplied to another electrode of the pair of electrodes is supplied (col. 5, lines 18-35),

a drive circuit which supplies signals to the respective pixels through signal lines arranged in plane is formed outside the pixel display part, the drive circuit is constituted of a plurality of semiconductor devices (124), a counter voltage (122) signal line arranged in the plane of the signal which supplies counter voltage signals to the counter electrode is formed on a region between one semiconductor device and another semiconductor device which is arranged adjacent to the one semiconductor device, and

a dummy line (138) is arranged in the plane of the signal lines and the counter voltage signal line and between the signal lines (134) and the counter voltage signal line (128B) outside of the image display part (col. 5, lines 37-67);

wherein the dummy line (138) is formed so as to extend along the signal line (134).

Ogawa teaches a dummy line (5a) wherein a dummy line (5a, fig. 2) is formed so as to extend along the signal line (52a1) (col. 9, lines 9-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the dummy line

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as taught by Ogawa in the system of Kwashiorkor in order to increase effecting between the dummy lines and signal lines.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwashiro (Patent No.: US 5,945,984) in view of Ogawa (Patent No. US 6,680,759).

Regarding claim 9, Kuwashiro does not specifically teach the dummy lines are connected with the signal lines.

Ogawa teaches the dummy lines are adjacent and connected with the signal lines (fig. 9, col. 11, lines 4-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the dummy lines are connected with the signal lines as taught by Ogawa and Kuwashiro in order to allow the dummy lines more stable.

Regarding claim 14, the combination of Kuwashiro and Ogawa teaches the signal lines have a bent portion along the extension thereof, and the dummy line extends along the signal lines and has a corresponding bent portion (fig. 2 of Ogawa).

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al. (Patent No. US 6,864,937) in view of Ogawa (Patent No. US 6,680,759).

Regarding claim 19, Moon differs from claim 19 in that he does not specifically teach

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the signal lines have a bent portion along the extension thereof, and the dummy line extends along the signal lines and has a corresponding bent portion.

Ogawa teaches signal lines have a bent portion along the extension thereof, and a dummy line extends along the signal lines and has a corresponding bent portion (fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the bent portion as taught by Ogawa in the system of Moon in order to provide a integrate driving circuit on the circuit board.

9. Claims 10, 12, 13, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwashiro (Patent No. US 5,945,984) in view of Ogawa (Patent No. US 6,680,759) and further in view of Hayakawa et al. (Patent No.: US 6,172,732).

Regarding claims 10 and 12, the combination of Kuwashiro and Ogawa differs from claim 10 in that it does not specifically teach the connection between the dummy lines and the signal lines are formed into a seal material which seals a pair of substrate.

Hayakawa teaches a connection between the dummy lines (43, fig. 6) and the signal lines (411) are formed into a seal material which seals a pair of substrate (col. 3, lines 55-57, col. 6, lines 19-22, col. 10, lines 39-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the connection between the dummy lines and the signal lines are formed into a seal material which seals a pair of substrate as taught by Hayakawa in the system of the combination of Kuwashiro and Ogawa in order to obtain a display panel having uniform electrical characteristics.

Regarding claim 13, the combination of Kuwashiro, Ogawa, and Hayakawa teaches the dummy line is arranged between the signal lines and the data transfer line so as to enable

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prevention of a disconnection due to static electricity caused by a spark generated between one of the signal lines and one of the data transfer lines (col. 11, lines 1-7 of Hayakawa).

Regarding claim 20, the combination of Kuwashiro, Ogawa, and Hayakawa teaches the dummy line (43, fig. 1 of Hayakawa) includes a first dummy line part and a second dummy line part, the first dummy line part is connected with the signal lines (41) which are arranged adjacent to the first dummy line part, and the second dummy line part is connected with the first dummy line part which is arranged adjacent to the second dummy line part (please see fig. 1 of Hayakawa).

Regarding claim 21, the combination of Kuwashiro, Ogawa, and Hayakawa teaches the connection between the first dummy line part and the signal lines, and the connection between the second dummy line part and the first dummy line part are formed into a seal material (44) which seals a pair of the substrates (col. 3, lines 55-57, col. 6, lines 19-22, col. 10, lines 39-42).

Regarding claim 22, the combination of Kuwashiro, Ogawa, and Hayakawa teaches the connection between the first dummy line part and the signal lines are formed into a seal material which seals a pair of the substrates, and the connection between the first dummy line part and the second dummy line part is formed at a position where the pair of the substrates overlap each other (col. 3, lines 55-57, col. 6, lines 19-22, col. 10, lines 39-42).

10. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable Moon et al. (Patent No. US 6,864,937) in view of Ogawa (Patent No. US 6,680,759) and further in view of Hayakawa et al. (Patent No.: US 6,172,732).



Regarding claim 16, the combination of Moon and Ogawa differs from claim 16 in that he does not specifically teach the connection between the dummy lines and the signal lines are formed into a seal material which seals a pair of substrate.

Hayakawa teaches a connection between the dummy lines (43, fig. 6) and the signal lines (411) are formed into a seal material which seals a pair of substrate (col. 3, lines 55-57, col. 6, lines 19-22, col. 10, lines 39-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the connection between the dummy lines and the signal lines are formed into a seal material which seals a pair of substrate as taught by Hayakawa in the system of the combination of Moon and Ogawa in order to obtain a display panel having uniform electrical characteristics.

Regarding claim 18, the combination of Moon, Ogawa, and Hayakawa teaches the dummy line is arranged between the signal lines and the counter voltage supply line so as to enable prevention of a disconnection due to static electricity caused by a spark generated between one of the signal lines and one of the data transfer lines (col. 11, lines 1-7 of Hayakawa).

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable Moon et al. (Patent No. US 6,864,937) in view of Ogawa (Patent No. US 6,680,759) and further in view of Shimada et al. (Patent No.: US 5,852,485).

Regarding claim 23, the combination of Moon and Ogawa differs from claim 23 in that he does not specifically teach a contact hole is formed in a region of the counter voltage signal line, and the contact hole connects the counter electrode to the counter voltage signal line.

Shimada teaches a contact hole (17, fig. 10B) us formed in a region of the counter voltage signal line (125), and the contact hole connects the counter electrode (11) to the counter voltage signal line (125) (col. 19, lines 25-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the contact hole as taught by Shimada in the system of the combination of Moon and Ogawa in order to improve contrast ratio and luminance of the display.

12. Applicant's arguments with respect to claims 2 and 4-19 have been considered but are moot in view of the new ground(s) of rejection.

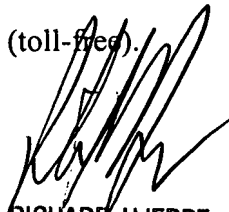
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen

  
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